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THE STATUS OF THE SUBCONSCIOUS.

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The interpretation to be given to that region of psychological activity for which the "subconscious" appears to be the most appropriate designation will influence fundamentally and comprehensively the conception of consciousness, the function of mind, and, indirectly, the scope and method of psychology. Definitions of psychology have at times attempted to include this elusive portion of the psychological domain either by distinct enactment or by implication, and have at times ignored or put aside as irregular or unexplored this darkest region ever tempting to the adventurous psychologist.

A varied accumulation of material—most of it gathered in recent years—and a renewed and somewhat encyclopedic interest in the completeness of description of our psychological fauna and flora have combined to draw attention from diverse directions of approach to the intrinsic importance of subconscious activities in the functional life of the mind, and of the formative importance of the conception of the subconscious in the shaping of working hypotheses in contemporary psychology. It is quite out of the question any longer to refer to these facts in a footnote, or to treat the issues involved as merely subsidiary; on the contrary, there is hardly a chapter in psychology that can be considered to be adequately portrayed or even truthfully sketched, that fails to incorporate the significant aspects of its subject derived from the study of the subconscious forms of the processes concerned. Memory, attention, habit, association, suggestion, imitation, and the rest of the familiar list of psychological activities are to be interpreted with equal reference to the shadows as well as to the high lights of the complex reality.

The problem presents a descriptive and an analytic phase, the former concerned with a natural history of the genera and species of the subconscious, the latter with the discovery of the

principles and generalizations that unify and illuminate the data and contribute to the establishment of fundamental positions in regard to what the mind is and does. For the present survey the logical requirements of these portions of the topic, though they should be held in mind, need not dominate the order of sequence or importance of the arguments to be advanced. It is mainly with the interpretation of the data together with an indication of their varieties and significance that we shall here be concerned.

The "subconscious" in turn presents two aspects, partially suggested by the substantive and by the adjective use of the term. The latter suggests that an activity which might be and usually is presented in conscious recognizability, is reduced or submerged to a sub-threshold degree; the former gives a hint that these submerged or outlying activities themselves may organize and co-operate and form an aggregate, itself an important number of the *dramatis personæ* of the psychological cast. In what sense, then, do subconscious activities exist? What is the psychological status of the "subconscious?"

Historically as well as logically the problem begins with subconscious sensations or the stimuli necessary to arouse them and leads to the formulation of the concept of a sensation-threshold. I do not hear the lapping of a single wave against the shore, but the accumulation of just such waves produces the roar of the sea. If I hold to my nose a single wood violet I can detect no odor; but a bouquet of these leaves a distinct impression. This is the absolute threshold. Still more significant for the mental life is the relative (or differential) threshold; the formulation of which summarizes a considerable array of evidence that when differences gradually decrease they fall into the region of the psychologically imperceptible, though the physical differences of the stimuli concerned may readily be established by simple physical tests. Two bowls of water seem equally warm to the finger, though not to a sensitive thermometer; two weighted boxes seem equally heavy, though so crude a physical apparatus as a grocer's scale at once indicates which is the heavier. Or to make the experiment more precise, the difference between 100 grammes and

102 grammes is an "imperceptible" difference, but five times that "imperceptible" difference, or the contrast between 100 grammes and 110 grammes, is a "perceptible" difference. What is the basis of this distinction? First it is obvious enough that there is no sudden drop, no "jumping-off place" in the transition from perceptibility to imperceptibility; and this is true both of the absolute and of the relative threshold. Parenthetically, it may be observed that the distinction between these two types of threshold, though important for practical purposes, in large measure falls away so far as the interpretation of the psychophysical relations is concerned; the absolute threshold becomes an expression for the capacity of a stimulus to raise itself up above the general murmur of diverse sense-stimuli to the clearness of a separate hearing, the relative threshold an expression for a like and individual differentiation in kind or degree from among the similarly arrayed candidates for mental notice.

The psychophysical process, the correlative action in the nervous system that accompanies the existence of the imperceptible difference, is very probably not intrinsically different in kind but varies only in degree from that which gives rise to a perceptible difference. Accordingly it is entirely natural that variations of condition will determine the perceptibility of a sense-impression. A difference—such as that between the heaviness of two weights, the brightness of two lights, the quality of two tones—is perceptible if the two impressions are presented in immediate successive contrast; allow a few moments to elapse between the two sense-impressions, and the perceptibility becomes uncertain or disappears. Still further it has been shown¹ that if in the presence of such imperceptible or sub-threshold differences, one persists in making judgments, which are wholly without confidence—seem, indeed, mere guess-work, without any conscious appreciation of that "local sign" which, if sufficiently magnified, would serve as the ground of their differentiation—the percentage of correct judgments will be larger than mere guesswork would produce; and the percentage

¹ First, I think, in the paper by Mr. C. S. Peirce and myself "Small Differences of Sensation" (*Proceedings of the National Academy of Sciences*, 1887).

of success will be greater for differences of stimuli but slightly below the (conscious) threshold value than for differences considerably below that level. A very interesting and wholly different bit of evidence for the similar influence of the imperceptible is furnished by a recent experimenter¹ who has demonstrated that in the case of the well-known illusion by which a horizontal line with a *divergent* pair of oblique lines at each end (arrow tips) seems longer than a line of equal length with a *convergent* pair of such arrow tips, the illusion persists (in moderate degree and in the average of a sufficient number of comparisons) even when the arrow tips, which are formed by shadows, become so faint that to the carefully observant eye they are quite imperceptible. These instances by no means stand alone; they may be supplemented, in less quantitative form, by a large array of normal experience going to show that sense-impressions, themselves imperceptible, *contribute to and influence* the behavior of consciousness. A constant and frequent intercourse takes place between the two realms; indeed, the boundary line between them is not a natural separation, but is in large measure of our own making, a practical concession to convenience of description.

It would very probably contribute appreciably to our clearness of conception of the nature of such subconscious impression were we acquainted with the neural substrata that represent their inseparable occurrence in, and by means of, a bodily organism; we might then know whether the registration of one of these imperceptible impressions proceeds quite in the same way, though with a lesser degree of energy or sphere of influence, as one that arouses consciousness, or whether the latter sets up some kind of brain activity that is not participated in in kind or degree by the neural correlative of imperceptible impressions. But our views upon this point are not likely to be illuminated by direct evidence of this kind; the views of the neural processes will be shaped inferentially from the psychological evidence that may be brought to bear upon that aspect of the problem. The evidence—and its variety will be suggested by later considerations—seems to me wholly to support the

¹Dunlap: "The Effect of Imperceptible Shadows on the Judgment of Distance," *Psychological Review*, Vol. VII, p. 435.

position that from the neural as well as the psychological point of view, a subconscious impression is closely affiliated to, is kith and kin with the conscious factors of experience.

The fundamental position thus reached is likely to be formulated by saying that the activity of mind, and with it the scope of psychology, is broader than the account of it obtainable from the direct perceptions of consciousness. Such formulation rejects the traditional position that "psychology is the study of states of consciousness," that its universal search-light is consciousness, and that what thus remains unrevealed is of wholly subsidiary import, to be included in a detailed inventory, but not essential to a rough blocking out of the mind's possessions or characteristics. The formulation that to me represents a truer perspective of importance reconstructs the import of the term consciousness so as to include within the vital meaning thereof these equally characteristic subconscious forms of its activity. Consciousness means not full awareness, focal introspection, but stands for the lights and shadows of the picture; its *chiaroscuro* refers to the entire distribution of distinctive forms of mental experience among the details of the situation.

It has become well recognized that the dominance of the introspective organon is supreme in the psychological world; that experiment does not oppose or restrict its testimony but far extends, deepens, clarifies and makes more precise its results. It supplies the gauging eye with a foot rule, the estimating hand with a balance; or it gives to the retina the enlargement of lenses and all the devices of increased and extended visibility, from the spectrum analysis of distant stars to the minute structure of microscopic nerve cells. Yet the introspective factor is only shifted, not eliminated. It would seem, then, that the subconscious introduces into the world of mind factors that are removed from introspective observation, and in so doing questions the distinctive trade mark of the psychological. But such is in reality not the case. The subconscious activities of the mind may be subjected to the criticism of introspective, if only we have the ingenuity and the opportunity to make them speak. Truly there is mystery enough in the inner life of the mind, but it inheres no differently in the subconscious than in the conscious operations thereof. Familiarity

has blunted our appreciation of the underlying ignorance in spite of superficial understanding of the commoner forms of mental experience; and their unusualness has emphasized the more striking and irregular instances in which quite extraordinary results must be ascribed to the operation of subconscious processes. To reinstate a proper view of the status of the subconscious in these aspects it becomes necessary to pass in review some of the most important types of its manifestations.

Our first group of illustrations was drawn from the field of sensory appreciation; its complement is that of motor expression. The relation of the subconscious to the subvoluntary is interesting and vital; the semi-observed and the semi-intentioned are as real and typical factors of conduct as are the reactions to which we purposely give heed and deliberately determine and execute. For both participants, as for the bond of relation between them, we formulate the concept of the automatic and the sphere of habit. I go all through my papers looking for a check received in the day's mail and find it already in my wallet, yet have no recollection of putting it there; I catch myself reaching for my watch over to my left waist-coat pocket and in so doing recall that in these summer days it is carried in a special pocket of my trousers; or I raise my hand to my head to lift my hat in greeting a lady, and try awkwardly to correct the movement initiated as a hat-raising one into the very different manipulation of a soft cap. These are merely the striking, because perchance misplaced, issues of subconscious automatisms. Just as illusions bring to light, in more striking form, the same subconscious types of sensory judgment and appreciation that are utilized a hundred fold more frequently in normal and commonplace, correctly interpreted experience—so, too, lapses of speech and conduct set forth more patently but not more typically the underlying structure of subvoluntary performances. The secret of the more extreme and unusual cases is to be sought in the rationale of the usual and commonplace; a common key will unlock the various compartments of the subconscious life.

While this view of the matter may not explain, it at all events vigorously opposes types of proposed explanations inconsistent therewith and places the source of the difficulty where it be-

longs; it is an aid to diagnosis if not to treatment. It tells us that if only we could explain memory—the fact that impressions now made, to-morrow disappear and weeks after reappear—if we could explain what is a disposition, a sensory or motor habit, which makes my expectation anticipate and falsify reality and makes me do more easily, more naturally and with less effort, what at first I do with difficulty; if we could satisfactorily account for the *provenance* and the manner of coinage of these pennies of the intellectual medium of exchange, the pounds would take care of themselves.

Psychology owes a great debt to Professor Lloyd Morgan for his masterly presentation of the spread of consciousness with the vital differentiation of its focal and marginal elements. The transition from marginal to focal, the influencing of focal factors by elements that persistently remain marginal, the ever widening and fading penumbra of the marginal field—these indicate an entire consistency with the view that the conscious includes the subconscious, that both participate with distinctive functions in a common form of mental action. Psychology is as intimately concerned with the marginal and with the most outlying portions of the marginal as with the focal; its attitude and mode of explanation are no different for the one than for the other. The question, however, still lies open as to whether outside of the entire conscious field there lies a province under other sovereignty, removed from a central control, not a subject of consciousness at all. This is the question more properly discussed as that of the unconscious; neither with the philosophical nor with the psychological status of this problem is it my intention to deal; its mention is necessary only to prevent a possible confusion between the two (closely related) issues. When Dr. Carpenter (about 1850) stirred up a controversy as to the existence and nature of "unconscious cerebration," he and his opponents were for the most part considering the nature of subconscious activities. The controversy was in part crude and the issues much confused; but the outcome was a distinctly more general recognition of the large share of influence belonging to mental activities that do not normally (though they in part may be made to) appear in consciousness.

A logically consistent view of the unconscious would posit the existence of organized groups of apperceptions that for the most part live a life of their own ; or parasitically taking their nurture from the host upon which they have fixed themselves, yet zoologically and functionally remain quite unrelated to the structure and activities of the chief partner of the organism. Those who have the courage to hold this view in its psychological form seem to have been driven to it by the more abnormal manifestations of the subconscious activities. They have been impressed with the fact that certain persons can write automatically with the one hand while the other may be very differently occupied ; and the message thus resulting come with all the surprise of novelty and extraneous origin to the writer's active consciousness. Though connected with the same brain the right hand seems not to know what the left hand is doing; just as in other instances the subject, when normally conscious, knows nothing of what he (more typically she) did when hypnotised, and, when hypnotised, reveals knowledge of data which the normal conscious volition cannot command. Still more strikingly, the experiences thus hidden from the normal consciousness may actually replace or alternate with those of the normal personality and give rise to those sudden mutations of personality, hypnotic assumptions of various rôles, distinct cycles in the epos of a "spiritualistically" controlled or entranced medium, or the quite regular alternations in mood, manner and memory-possessions in the hysterical. It is in this field that we meet with hypotheses and terminology to set them forth, from the crude recognition of this partner ego as in control of the other cerebral hemisphere to the equally baseless assumption of an "objective" and a "subjective" ego; and, intermediately, with subliminal selves, submerged strata of consciousness, "unvisited psychological lumber rooms," split-off personalities, and the like,—a "tumbling-ground for whimsies," surely, as Professor James cautions us that speculations in regard to the unconscious are apt to produce. Now, so far as we have any insight into the nature of these phenomena, it becomes clear that they in no wise sanction the hypothesis of a separate subconscious organization. Two things are clear above all: first, that intermediate between these extreme ex-

amples and the commonplace incidents of the life of the subconscious, are many forms of manifestation forming a bridge of analogy from the one to the other. Dreaming is in itself a sufficiently versatile process to manifest them all. For in dreams "a number of different personalities occupy the stage at the same time, each representing a different point of view, each ignorant of the next move of his fellows, and yet there is nothing strictly unconscious nor any absolute cleft in consciousness, for all the *dramatis personæ* are included in the larger single mind which is their theater."¹ In hypnosis as in trance-states, in hysteria as in spontaneous alterations of personality, there is abundant evidence that the subconscious is then in close communication with the conscious, and that suggestion has often furnished the key by which the passage from one to the other may be opened up. Read in this light such a story as that of Professor Flournoy's Hélène Smith becomes intelligible; posit an independent realm of consciousness (call it the subconscious or the unconscious) and you have chaos or "a tumbling-ground for whimsies." The issue reminds one of the little barometric contrivances in which one fantastically arrayed figure comes forward in fair weather and another on dark days; the fair-weather-consciousness knows nothing of the other, and the low barometer acquainted only with cloudy skies would find incomprehensible the optimistic temperament of its ignored partner, if, indeed, it could be made aware of it at all. As a fact, however, there are not within us two souls with not a single thought in common, nor even one heart that

¹I take this sentence from Professor Stratton's chapters on the unconscious in his recently published volume (*Experimental Psychology and Culture*, 1903) and desire to use this opportunity of recording my satisfaction in discovering that his conclusions are so closely parallel to my own. So close is the agreement as to render it pertinent for me to add that my own discussion was well formulated and partly presented verbally before a meeting of psychologists in Chicago in November, 1902, and again in Washington in December, 1902, before I was at all aware of Professor Stratton's contributions. In the writing of the present essay, I have profited much by his chapters, and I have allowed his presentation to stand for certain aspects of the problem which I had intended to treat, but in which he has adequately anticipated my own position.

beats as two. Abnormal as these classifications of co-ordinated experiences surely are, their explanation does not justify the hypothesis of a separate subconscious mind. They cannot overthrow but must be assimilated to the vast aggregate of normal evidence for the intrinsic kinship of the conscious and the subconscious. Not only, then, do the abnormal data not demand or justify the hypothesis of a separate, independently organized "subconscious," but such an hypothesis actually devitalizes and obscures the significance (so far as understood) of these phenomena. In the second place, to resume the enumeration above indicated, every hypothesis of this type should be broad enough to include both the normal and the abnormal phases of mental action, and should more particularly take its clue and reveal its validity through its power to illuminate and comprehend the normal mental life. The hypothesis of the independent subconscious—the pale shadow of the flesh and blood partner, as the cover-design of a well-known book on the subconscious visualizes it—sins against all of these requirements.

I am well aware that this eclectic presentation of a discussion provoked by a recent survey of the facts and of the literature concerning subconscious activities—a survey that will in due season lead to a more systematic publication—does not constitute an adequate brief in behalf of the extension of domain of the normal conceptions of consciousness over the subconscious. Yet in view of the many hypotheses, and of treatises presenting them, that argue for the opposite view—and the extreme forms of which, however slight a hold they may have upon the professional psychologist, yet decidedly influence the lay reader and the interested public—it seems distinctly worth while to reinforce the position, no doubt more or less indefinitely approved by many, by more explicit statement.

The subconscious activities may accordingly be brought to light (1) by direct evidence, that intensive concentrated consciousness fails to reveal the causes in operation that do none the less contribute to and influence thought and action. In the simplest form of such influence we find that sensory stimuli which with the most intensive attention of which we are capable seem to register no effect, yet can be experimentally shown to be capable

of influencing our apperceptive processes. This is but one sample of this form of evidence; others are contributed by the formation of habit, by unconscious inferential processes in normal sensation, by sudden budding forth of memory images and the like. Certain of these instances are intermediate in form and lead to (2) the extensive spread of consciousness in which the marginal elements constitute the subconscious factors; such factors may in large part be brought into the focus by direct conscious effort. Such effort is variously successful in the introspectively expert as contrasted with the novice, according to the degree to which the fixity of interpretation has crystallized into a habit difficult to overthrow, and in the end according to individual differences of mental constitution. Yet the recoverability of much of it—the possibility of shifting the search light of consciousness over a considerable area—has been sufficiently established to justify the extension of such conceptions to the field of the subconscious as a whole. Both intensively and extensively, the subconscious thus establishes its kinship to, its right to a seat at the hearth of consciousness. The corollaries from this position are many. They extend to the abnormal as well as the normal; they appear best in a descriptive account of the varieties of subconscious activities in their functional rôles in actual life; they distinctly favor the unity of structure of the mental organism and as determinately oppose the hypothesis of a vital subdivision or partition of such organized activities. While the strength of the view thus advanced depends upon the descriptive evidence, which it is my intention to set forth elsewhere, it seems to me that, from the analytical point of view, a result both consistent with and corroborative of the inductive résumé can be established. Such establishment, and a more universal recognition of the functional import of the subconscious in the general mental life, will go far to reinstate to its proper importance the status of the subconscious in contemporary psychology.